IN THE CLAIMS

Please amend the claims as follows:

1.   (Currently Amended) A method comprising:

dividing an input image and an output image into blocks, wherein each block in the output image corresponds to one block in the input image;

calculating a color average of each input block;

calculating a set of output colors for each block in the output image to match the color average of its corresponding block in the input image; and

generating an indication to control positioning of the set of output colors in said each block of the output image to match a target color and reduce spatial artifacts given the set of output colors.

2.   (Original) The method defined in Claim 1 further comprising dividing each input and output block into subblocks in response to a certain criteria being met.

3.   (Original) The method defined in Claim 2 wherein the criteria for dividing a block into subblocks is whether the block contains an edge.

4.   (Original) The method defined in Claim 1 wherein characteristics of the block are such that a human eye averages colors associated with the block.

5.   (Original) The method defined in Claim 4 wherein the characteristics include one or more of size, shape and expected viewing distance.

6.   (Original) The method defined in Claim 1 wherein calculating the set of output

colors is performed by examining possible values achievable in a color space and locating an

achievable value closest to the color average of the corresponding input block.

7.   (Original) The method defined in Claim 1 wherein calculating the set of output

colors comprises using a look-up table on the average color to determine output colors in the set.

8.   (Currently Amended) The method defined in Claim 7 wherein the average color

distance output color is the-set either exactly or approximately.

9-12.   (Cancelled)

13.   (Currently Amended) A method comprising:

dividing an input image and an output image into blocks, wherein each block in the

output image corresponds to one block in the input image, The method defined in Claim 1

wherein dividing the input image and the output image into blocks comprises dividing a block of

the input image into subblocks bycomprises:

        calculating a function of the color value for each block and for each of a plurality

of subblocks in said each block;

        determining if the distance between the function of the color value of the block

and subblocks is greater than a threshold; and

        dividing the block into subblocks if the difference is greater than the threshold;

calculating a color average of each input block;

calculating a set of output colors for each block in the output image to match the color

average of its corresponding block in the input image; and

generating an indication to control positioning of the set of output colors in said each

block of the output image.

14.   (Original) The method defined in Claim 13 further comprising determining an

edge exists by comparing a function of color values for each subblock to the function's value for

the other subblocks of the block.

15.   (Original) The method defined in Claim 13 wherein the plurality of subblocks

comprises four subblocks.

16.   (Original) The method defined in Claim 1 further comprising positioning colors

within each block to match a target color and reduce spatial artifacts given the set of output

colors.

17.   (Currently Amended) The method defined in Claim 16 wherein generating an

indication to control positioningtessellating colors within each block comprises performing

regular gridding.

18.   (Currently Amended) The method defined in Claim 16 wherein generating an

indication to control positioningtessellating colors within each block comprises using a dither

matrix ordering of the chosen output colors.

19.   (Currently Amended) An article of manufacture having a recordable medium

storing executable instructions which, when executed by a system causes the system to perform

the method comprisingsteps of Claim 1:

dividing an input image and an output image into blocks, wherein each block in the

output image corresponds to one block in the input image;

calculating a color average of each input block;

calculating a set of output colors for each block in the output image to match the color

average of its corresponding block in the input image; and

generating an indication to control positioning of the set of output colors in said each

block of the output image to match a target color and reduce spatial artifacts given the set of

output colors.

20.   (Currently Amended) An apparatus comprising:

a divider to divide an input image and an output image into blocks, wherein each block in

the output image corresponds to one block in the input image;

first logic to calculate a color average for each input block;

second logic to calculate a set of output colors for each block in the output image to

match the color average of its corresponding block in the input image; and

indication generation logic to generate an indication to control positioning of the set of

output colors in said each block of the output image to match a target color and reduce spatial

artifacts given the set of output colors.

21.   (Original) The apparatus defined in Claim 20 wherein the divider divides each

input and output block into subblocks in response to a certain criteria being met.

22.   (Original) The apparatus defined in Claim 20 wherein the criteria for dividing a

block into subblocks is whether the block contains an edge.

23.   (Currently Amended) The apparatus defined in Claim 20~~19~~ wherein

characteristics of the block are such that a human eye averages colors associated with the block.

24.   (Original) The apparatus defined in Claim 23 wherein the characteristics include

one or more of size, shape and expected viewing distance.

25.   (Currently Amended) The apparatus defined in Claim 20~~19~~ wherein the second

logic to calculate the set of output colors examines possible values achievable in a color space

and locates an achievable value closest to the color average of the corresponding input block.

26.   (Currently Amended) The apparatus defined in Claim 20~~19~~ wherein the second

logic to calculate the set of output colors uses a look-up table on the average color to determine

output colors in the set.

27.   (Currently Amended) The apparatus defined in Claim 26 wherein the average

color distance output color is ~~the~~ set either exactly or approximately.

28-31. (Cancelled)

32.   (Currently Amended) <u>An apparatus comprising:</u>

<u>a divider to divide an input image and an output image into blocks, wherein each block in the output image corresponds to one block in the input image, the divider</u><s>The apparatus defined in Claim 20</s><u>19</u> <s>further</s> <u>comprising</u><s>es:</s>

calculation logic to generate a function of the color value for each block and for each of a plurality of subblocks in said each block;

determination logic to determine if the distance between the function of the color value of the block and subblocks is greater than a threshold;<s>-and</s>

a divider to divide the block into subblocks if the difference is greater than the threshold<u>;</u>

<u>first logic to calculate a color average for each input block;</u>

<u>second logic to calculate a set of output colors for each block in the output image to match the color average of its corresponding block in the input image; and</u>

<u>indication generation logic to generate an indication to control positioning of the set of output colors in said each block of the output image to match a target color and reduce spatial artifacts given the set of output colors.</u>

33.   (Original) The apparatus defined in Claim 32 further comprising determination logic to determine an edge exists by comparing a function of color values for each subblock to the function's value for the other subblocks of the block.

34.   (Original) The apparatus defined in Claim 32 wherein the plurality of subblocks comprises four subblocks.

35. (Currently Amended) The apparatus defined in Claim 20~~19~~ further comprising control logic to position colors within each block to match a target color and reduce spatial artifacts given the set of output colors.

36. (Original) The apparatus defined in Claim 35 wherein the control logic performs regular gridding within each block.

37. (Original) The apparatus defined in Claim 36 wherein the control logic performs dither matrix ordering of the chosen output colors within each block.

38. (Currently Amended) An apparatus comprising:

means for dividing an input image and an output image into blocks, wherein each block in the output image corresponds to one block in the input image;

means for calculating a color average of each input block;

means for calculating a set of output colors for each block in the output image to match the color average of its corresponding block in the input image; and

means for generating an indication to control positioning of the set of output colors in said each block of the output image to match a target color and reduce spatial artifacts given the set of output colors.

39. (Currently Amended) A method comprising:

dividing the input image and the output image into blocks comprises adaptively sizing blocks with edges to create a plurality of blocks without edges; and

computing, as part of a halftoning process, a set of output colors that best renders a color

average of the input image for the corresponding block.

40.   (Original) The method defined in Claim 39 wherein the input image's color gamut

is pre-warped to adjust for the output color gamut.

41.   (Original) An apparatus comprising:

means for dividing the input image and the output image into blocks comprises means for

adaptively sizing blocks with edges to create a plurality of blocks without edges; and

means for computing, as part of a halftoning process, a set of output colors that best

renders a color average of the input image for the corresponding block.

42.   (Currently Amended) The apparatus defined in Claim 41~~39~~ wherein the input

image's color gamut is pre-warped to adjust for the output color gamut.

43.   (Original) An apparatus comprising:

a divider to divide the input image and the output image into blocks by means for

adaptively sizing blocks with edges to create a plurality of blocks without edges; and

computation logic to compute, as part of a halftoning process, a set of output colors that

best renders a color average of the input image for the corresponding block.